



**PHASE II ENVIRONMENTAL SITE ASSESSMENT  
3105 HOLBROOK STREET  
HAMTRAMCK, MICHIGAN**

*for*

**CITY OF HAMTRAMCK  
3401 EVALINE STREET  
HAMTRAMCK, MICHIGAN 48212**

**AKT Peerless Project No. 6476d-3-20  
June 7, 2010**

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## **PHASE II ENVIRONMENTAL SITE ASSESSMENT**

**3105 HOLBROOK STREET  
HAMTRAMCK, MICHIGAN**

**AKT PEERLESS PROJECT NO. 6476D-3-20**

### **1.0 INTRODUCTION**

The City of Hamtramck retained AKT Peerless Environmental & Energy Services (AKT Peerless) to conduct a Phase II Environmental Site Assessment (Phase II ESA) of the building and associated parking lot at 3105 Holbrook Street in Hamtramck, Michigan (subject property) under the U.S. Environmental Protection Agency (EPA) Brownfield Assessment Grant Program. This Phase II ESA was conducted in accordance with AKT Peerless' Proposal for a Phase II ESA (Proposal Number PF-10763), dated April 1, 2010, Phase II Sampling and Analysis Plan (SAP), dated April 23, 2010, and is based on American Society for Testing and Materials (ASTM) Designation E 1903-97 "*Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*."

This Phase II ESA scope of work is intended to evaluate the RECs presented in Section 2.5. This Phase II ESA scope of work does not evaluate the following:

- Asbestos
- Mold
- Lead

AKT Peerless' Phase II ESA report documents the field activities, sampling protocols, and laboratory results. AKT Peerless' Phase II ESA was performed for the benefit of the City of Hamtramck, who may rely on the contents and conclusions of this report.

### **2.0 BACKGROUND**

#### **2.1 SITE DESCRIPTION AND PHYSICAL SETTING**

The subject property is located at 3105 Holbrook Street in Hamtramck (Township 1 South/Range 12 East), Wayne County, Michigan. The subject property is situated at the northeastern corner of Holbrook and McDougall Streets. It consists of one rectangular-shaped parcel that contains approximately 0.17-acres. The subject property's parcel number is 82-41-006-04-002-000. The subject property is currently developed with a commercial structure, and is located in an area of Hamtramck that is characterized by residential and commercial properties.

Refer to Figure 1 for a topographic site location map. See Figure 2 for a site map with utility locations.

## 2.2 SUBJECT PROPERTY HISTORY AND LAND USE

The subject property contains a commercial building and associated paved areas. The subject building is currently occupied by the Polish American Veteran's Club.

AKT Peerless' research revealed that the subject property consisted of unimproved land from at least 1915 until it was improved with a commercial building in 1924. Building plans provided by the current owner of the subject property indicate that an addition was constructed to the northern portion of the subject building. Although these plans were not dated, it appears that this addition may have occurred in the late-1930s or 1940s. The subject property has been utilized as the Polish American Veteran's Club since construction in 1924.

## 2.3 ADJACENT PROPERTY LAND USE

The following table describes the current uses of the adjoining properties, identified occupants, and noteworthy observations of environmental concern, if any, that were noted during AKT Peerless' recent subsurface investigation.

Direction	Address	Current Use / Occupant	Potential Concerns
north	Non-Responsive	residential / various residential tenants	none observed
east		residential / various residential tenants	none observed
southeast		residential / various residential tenants	none observed
south		residential / various residential tenants	none observed
		commercial / accountant's office	none observed
southwest		residential / various residential tenants	none observed
west		commercial / Dale's Party Store	none observed
northwest		residential / various residential tenants	none observed

## 2.4 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

On March 30, 2010, AKT Peerless completed a Phase I ESA of the subject property. The purpose of this Phase I ESA was to evaluate the current and historical conditions of the subject property in an effort to identify *recognized environmental conditions* (RECs)<sup>1</sup> and *historical*

<sup>1</sup> ASTM's Standard Practice E 1527-05 defines the term recognized environmental condition (REC) as the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate (1) an existing release, (2) a past release, or (3) a material threat of a release of a hazardous substance or petroleum product into structures on the subject property or into the ground, groundwater, or surface water of the subject property.

*recognized environmental conditions* (HRECs)<sup>2</sup> in connection with the subject property. The following RECs were identified at the subject property.

1. Undated building plans provided by the current subject property owner depict a coal storage room formerly located along the northern-central wall of the basement of the subject building. It is AKT Peerless' opinion that the former use of coal as a heating source at the subject property may have adversely affected the subject property's soil and/or groundwater.
2. Southern adjoining property (3102 Holbrook Street) was identified on the EDR Historical Dry Cleaners Database. According to the EDR Report, Mary Stczkiewicz (a clothes presser and cleaner) operated on this adjoining property in 1940. It is AKT Peerless' opinion that the former use of the southern adjoining property as a dry cleaner may have adversely affected the subject property's soil and/or groundwater.

### **3.0 PHASE II ENVIRONMENTAL SITE ASSESSMENT ACTIVITIES**

#### **3.1 SCOPE OF ASSESSMENT**

AKT Peerless conducted a Phase II ESA at the subject property for the following purposes: (1) evaluate for the presence of contamination on the subject property based on the RECs identified within the Phase I ESA and (2) evaluate levels of contamination to determine if the subject property meets the definition of a "facility"<sup>3</sup> as defined in Part 201 of Natural Resources and Environmental Protection Act (NREPA), Michigan Public Act (PA) 451, 1994, as amended.

To further evaluate the RECs, AKT Peerless conducted a subsurface investigation of the subject property that included: (1) the advancement of three soil borings (HHM-HA-1 through HHM-HA-3) and (2) the collection of four soil samples. Samples were submitted for select laboratory analysis of appropriate parameters including volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), and Michigan metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc).

The following table summarizes each REC, the site investigation activities performed to address each REC, and the laboratory parameters used to address each REC.

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<sup>2</sup> ASTM defines the term historical recognized environmental condition (HREC) as an environmental condition which in the past would have been considered an REC, but which may or may not be considered an REC currently. Neither HRECs nor RECs are intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

<sup>3</sup> "Facility" means any area, place, or property where a hazardous substance in excess of the concentrations which satisfy the requirements of Sections 20120a(1)(a) or (17) or the cleanup criteria for unrestricted residential use under Part 213 has been released, deposited, disposed of, or otherwise comes to be located. Facility does not include any area, place, or property at which response activities have been completed which satisfy the cleanup criteria for the residential category provided for in section 20120a(1)(a) and (17) or at which corrective action has been completed under Part 213 which satisfies the cleanup criteria for unrestricted residential use.

### Summary of AKT Peerless' Scope of Investigation

REC #	Environmental Concern	Investigation Activity	Analytical Parameters
REC 1	Former coal storage	HHM-HA-1	PNA and Michigan metals
REC 2	Historical use of southern adjoining property as a dry cleaner	HHM-HA-2 and HHM-HA-3	VOCs

#### **3.1.1 Soil Evaluation**

On May 17, 2010, AKT Peerless advanced three soil borings (HHM-HA-1 through HHM-HA-3) at the subject property. AKT Peerless used hand-auger sampling techniques. AKT Peerless collected continuous soil samples from the soil borings in one-foot intervals to the maximum depth explored of four feet below ground surface (bgs). AKT Peerless personnel inspected, field-screened, and logged the samples collected at each soil boring location. Refer to Figure 2 for a site map with soil boring locations. Boring logs are provided in Appendix A.

#### **3.1.2 Groundwater Evaluation**

AKT Peerless did not encounter groundwater in any of the soil borings advanced at the subject property.

### **3.2 QUALITY ASSURANCE/QUALITY CONTROL**

To ensure the accuracy of data collected during on site activities, AKT Peerless implemented proper quality assurance/quality control (QA/QC) measures. The QA/QC procedures included, but were not limited to, (1) decontamination of sampling equipment before and between sampling events, (2) calibration of field equipment, (3) documentation of field activities, and (4) sample preservation techniques.

#### **3.2.1 Decontamination of Equipment**

During sample collection, AKT Peerless adhered to proper decontamination procedures. Sampling equipment was decontaminated using the following methods to minimize potential cross-contamination of soil samples:

- Steam-cleaning or washing and scrubbing the equipment with non-phosphate detergent
- Rinsing the equipment
- Air-drying the equipment

#### **3.2.2 Calibration of Field Equipment**

All field instruments were calibrated prior to first use on-site to ensure accuracy. Field instruments utilized during investigation activities at this subject property were a photoionization detector (PID).

During AKT Peerless' Phase II ESA, a PID was used to screen all soil samples. The PID was maintained in a calibrated condition using 100 parts per million (ppm) isobutylene span gas prior to subsurface investigations.

### **3.2.3 Documentation of Activities**

During AKT Peerless' Phase II ESA activities, subject property conditions (i.e., soil boring locations, weather conditions, etc.) were documented. AKT Peerless visually inspected the soil samples and prepared a geologic log for each soil boring. The logs include soil characteristics such as (1) color, (2) composition (e.g., sand, clay, or gravel), (3) soil moisture and water table depth, and (4) signs of possible contamination (i.e., stained or discolored soil, odors). Soil types were classified in accordance with ASTM publication D-2488 "*Unified Soil Classification System*." All soil samples were delivered to a laboratory under chain-of-custody documentation. See Appendix A for AKT Peerless' soil boring logs. See Figure 2 for site map with soil boring locations.

### **3.2.4 Sample Preservation Techniques**

AKT Peerless collected soil samples in accordance with USEPA Publication SW-846, "*Test Methods for Evaluating Solid Waste*." Soil samples were collected in laboratory-supplied containers, stored on ice or at approximately 4 degrees Celsius, and submitted under chain-of-custody documentation.

Soil samples collected for volatile analyses were field preserved with methanol in accordance with U.S. EPA Method 5035. Soil samples collected for polynuclear aromatic hydrocarbons (PNAs), and metals analyses were stored in unpreserved, 4-ounce wide-mouth jars.

### **3.2.5 QA/QC Sample Collection**

The following table describes the QA/QC samples collected for each matrix.

**Summary of AKT Peerless QA/QC Sampling**

<b>QA/QC Sample</b>	<b>Laboratory Analytical Parameter(s)</b>	<b>Matrix</b>	<b>Number of Samples</b>
Trip Blank	VOCs	Water	1
Methanol Blank	VOCs	NA	1

## **3.3 LABORATORY ANALYSES AND METHODS**

AKT Peerless submitted four soil samples for laboratory analyses. The following table summarizes the location, depth, matrix, and laboratory analysis for each sample.



### Summary of Laboratory Analyses

Sample Name/Depth (in feet)	Matrix	VOCs	PNAs	Michigan Metals
HHM-HA-1 (0.5-1)	Soil	-	☑	☑
HHM-HA-2 (2-4)	Soil	☑	-	-
HHM-HA-3 (0.5-1)	Soil	☑	-	-
HHM-HA-3 (2-4)	Soil	☑	-	-

The laboratory analyzed the samples for: (1) VOCs in accordance with USEPA Method 8260B; (2) PNAs in accordance with USEPA Method 8270C; and (3) Michigan metals in accordance with USEPA Method 6020 and 7471A.

## 4.0 EVALUATION AND PRESENTATION OF RESULTS

### 4.1 SUBSURFACE CONDITIONS

#### 4.1.1 Soil and Groundwater Conditions based on Published Material

According to the MDNR Geological Survey Division's *Bedrock Geology of Southern Michigan* (1987), bedrock beneath the subject property is classified as Dundee Limestone of Erian series within the Devonian System of the Paleozoic Era. The depth to bedrock beneath the subject property was not readily available prior to the completion of this Phase I ESA.

According to the MDNR Geological Survey Division's publication, *Quaternary Geology of Southern Michigan* (1982), soil in the area is lacustrine clay and silt. This soil is described as gray to dark reddish brown and is varved in some localities. The soil chiefly underlies extensive, flat, low-lying areas formerly inundated by glacial Great Lakes. The soil thickness ranges from 10 to 30 feet. Typically, lacustrine clay and silt are associated with low hydraulic permeability and restrict the movement of groundwater.

According to the USDA's *Soil Survey of Wayne County Area, Michigan* (1977), soil at the subject property is classified as belonging to the Bellville-Selfridge-Tedrow association, which is described as "nearly level to gently sloping, very poorly drained to somewhat poorly drained soils that have a coarse textured to moderately fine textured subsoil over a coarse textured to moderately fine textured substratum."

AKT Peerless did not obtain or review reports that document actual groundwater conditions at or adjacent to the subject property. Therefore, AKT Peerless was unable to (1) identify the depth to shallow groundwater beneath the subject property or (2) determine the groundwater flow direction beneath the subject property.

Typically, the water table aquifer flows toward a major drainage feature or in the same direction as the drainage basin. The Detroit River, which flows to the southwest, is located approximately

4.5-miles southeast of the subject property at its nearest point. Therefore, AKT Peerless infers that groundwater beneath the subject property flows to the southeast.

AKT Peerless' research did not identify known groundwater recharge areas on or near the subject property, or groundwater supply or monitor wells on the subject property. Groundwater from the area of the subject property does not serve as the primary drinking water source for properties in Hamtramck, which obtains its municipal water from Lake Saint Clair and the Detroit River. Public sources of information do not identify main aquifers below the subject property.

#### **4.1.2 Soil and Groundwater Conditions based on Field Observations**

During drilling activities, AKT Peerless encountered the following soil types:

- FILL from below the concrete to approximately one foot below ground surface. This fill consisted of black sand and gravel.
- CLAY from one foot to four feet below ground surface, the maximum depth explored. This clay was medium-stiff to stiff and grey in color.

AKT Peerless did not encounter groundwater in any of the soil borings completed at the subject property.

Other than the fill material, the geology encountered during this Phase II ESA is consistent with the geology described in the publications noted in Section 2.4. Soil boring logs are included as Appendix A.

## **4.2 MDEQ RELEVANT EXPOSURE PATHWAYS AND APPLICABLE CRITERIA**

### **4.2.1 Relevant Exposure Pathways**

As defined in Michigan Public Act 451 Part 201, "relevant pathway" means an exposure pathway that is reasonable and relevant because there is a reasonable potential for exposure to a hazardous substance. The analysis of potential exposure pathways is based on known existing conditions at the subject property. The following subsections identify the relevant exposure pathways based on the subject property conditions observed.

#### **4.2.1.1 Ingestion of Groundwater Pathway**

Groundwater was not encountered in any of the soil borings advanced at the subject property. Soil borings were advanced to a maximum depth of four feet below the concrete floor in the basement of the subject building, the maximum depth explored. AKT Peerless encountered a confining layer consisting of clay from one foot below the concrete to four feet below the concrete.

In addition, the City of Hamtramck provides municipal drinking water service. Therefore, Ingestion of Groundwater at the subject property is not a relevant exposure pathway.

#### **4.2.1.2 Groundwater Venting to Surface Water Pathway**

Groundwater was not encountered in any of the soil borings advanced at the subject property. Further, Groundwater Venting to Surface Water is not a human exposure pathway, but rather an exposure pathway based on aquatic toxicity. The subject property is not located adjacent to any lakes or rivers and AKT Peerless did not encounter any groundwater at the subject property. Therefore, groundwater venting to surface water is not a relevant exposure pathway.

#### **4.2.1.3 Groundwater Contact Pathway**

Groundwater contact pathway is a relevant pathway.

#### **4.2.1.4 Volatilization to Indoor Air Inhalation Pathway**

Volatilization to Indoor Air Inhalation is a relevant exposure pathway.

#### **4.2.1.5 Volatilization to Ambient Air Pathway**

Volatilization to Ambient Air is a relevant exposure pathway.

#### **4.2.1.6 Particulate Inhalation Pathway**

Particulate Inhalation is a relevant exposure pathway.

#### **4.2.1.7 Direct Contact Pathway**

Direct Contact is a relevant exposure pathway.

#### **4.2.2 Applicable Criteria**

Applicable criterion means a cleanup criterion for a relevant pathway. A criterion is not applicable if the exposure pathway is not relevant. Based on the exposure pathway evaluation, the applicable pathways at the subject property include:

- Groundwater Contact Protection Criteria (GCP);
- Soil Volatilization to Indoor Air Inhalation (SVIAI);
- Infinite Source Volatile Soil Inhalation (VSIC);
- Particulate Soil Inhalation (PSI), and;
- Soil Direct Contact (DC).

AKT Peerless compared the laboratory analytical data to the applicable Part 201 Residential Generic Cleanup Criteria (GCC) as published by the MDNRE-RRD.

### **4.3 LABORATORY ANALYTICAL RESULTS**

AKT Peerless collected soil and groundwater samples for the purpose of determining if the subject property meets the definition of a *facility*. Analytical results were compared with Michigan Department of Natural Resource and Environment (MDNRE) Residential and

Commercial I Generic Cleanup Criteria provided in MDNRE Remediation and Redevelopment Division's Operational Memorandum No. 1, Tables 1 and 2.

#### 4.3.1 Soil Analytical Results

AKT Peerless submitted four soil samples for laboratory analysis of select parameters including VOCs, PNAs, and Michigan metals. The results of the laboratory analyses of the soil samples are summarized in the table below:

**Summary of Soil Analytical Results**

Soil Boring Location & Depth	Parameter	MDEQ Criteria Exceeded						
		DWP	GSIP	GCP	SVIAI	VSI	PSI	DC
HHM-HA-1 (0.5-1)	Arsenic	☑	-	-	-	-	-	☑
	Chromium (total)	-	☑	-	-	-	-	-
	Mercury (total)	-	☑	-	-	-	-	-
	Selenium	-	☑	-	-	-	-	-
	Silver	☑	☑	-	-	-	-	-

DWP – Drinking Water Protection Criteria

GSIP – Groundwater Surface Water Interface Protection Criteria

GCP – Groundwater Contact Protection Criteria

SVIAI – Soil Volatilization to Indoor Air Inhalation Criteria

VSI – Volatile Soil Inhalation Criteria

PSI – Particulate Soil Inhalation Criteria

DC – Direct Contact Criteria

Although arsenic was detected in the above soil sample at a concentration that exceeded applicable MDNRE Generic Residential Cleanup Criteria (GRCC), this concentration is well within regional background levels typically found in this area. Therefore, the arsenic concentration does not present significant exposure risk to occupants of the subject property.

Refer to Table 1 for a summary of soil analytical results. Refer to Appendix B for a complete analytical laboratory report.

#### 4.3.2 Groundwater Analytical Results

AKT Peerless did not encounter groundwater at the subject property.

#### 4.3.3 Quality Assurance/Quality Control Analytical Results

QA/QC samples were collected in accordance with the QA/QC sample procedures outlined in the “QAPP, Brownfield Assessment Program, Hazardous Substances and Petroleum Site Assessment Grant, MACC.”, dated November 2008 Revision 1. Samples were analyzed within hold times and in accordance with specified methods for each analytical group. Laboratory analytical results for samples analyzed met QA/QC data quality objectives as outlined in the QAPP and the site-specific Phase II SAP.

## **5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

### **5.1 SUMMARY OF ENVIRONMENTAL CONCERNS**

Based on AKT Peerless March 2010 Phase I ESA, the following environmental concerns were identified:

- Former coal room
- Historical use of the southern adjoining property as a dry cleaner

### **5.2 SUMMARY OF SUBSURFACE INVESTIGATION**

On May 17, 2010, AKT Peerless conducted a subsurface investigation at the subject property to further evaluate environmental concerns identified during previous environmental investigations. AKT Peerless (1) advanced three soil borings (HHM-HA-1 through HHM-HA-3) and (2) collected soil samples for laboratory analyses. AKT Peerless submitted soil samples for laboratory analyses of select parameters, including: VOCs, PNAs, and Michigan metals.

Based on laboratory analytical results soil samples collected at the property indicate that concentrations of arsenic exceed MDNRE Part 201 Generic Residential Soil Direct Contact Criteria. However, although arsenic was detected in the above soil sample at a concentration that exceeded applicable MDNRE GRCC, this concentration is well within regional background levels typically found in this area. Therefore, the arsenic concentration does not present significant exposure risk to occupants of the subject property.

No other target parameters were detected at concentrations above applicable MDNRE GRCC. Therefore, in AKT Peerless' opinion, the subject property does not meet the definition of a "facility", as defined in Part 201 of Natural Resources and Environmental Protection Act (NREPA), Michigan Public Act (PA) 451, as amended.

### **5.3 RECOMMENDATIONS**

In AKT Peerless' opinion, no further investigation of the subject property is warranted at this time.

## **6.0 LIMITATIONS**

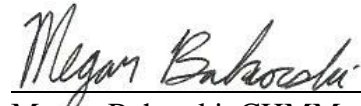
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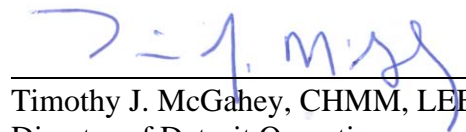
## **7.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS**

The following individuals contributed to the completion of this investigation.



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Environmental Consultant

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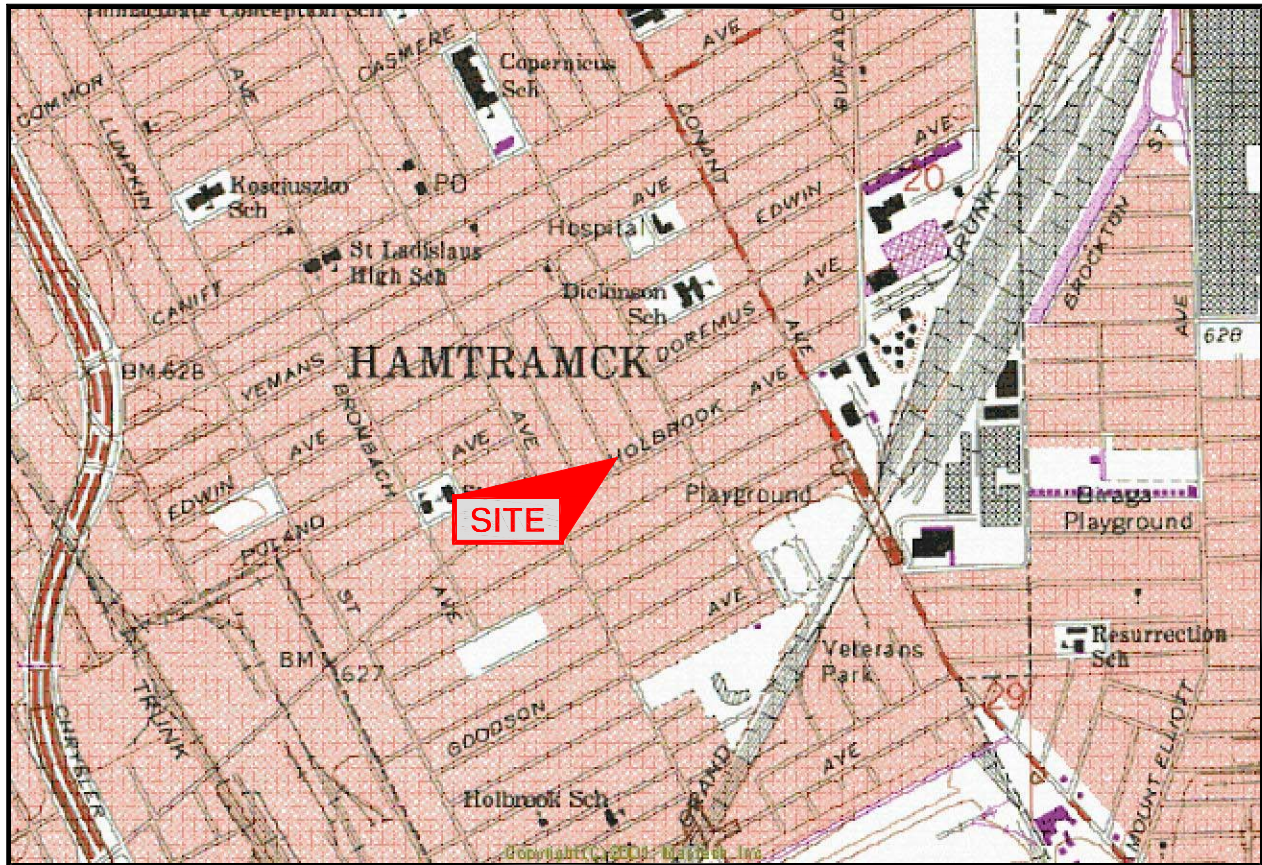
**AKT PEERLESS ENVIRONMENTAL AND ENERGY SERVICES**  
Detroit, Michigan Office

## **FIGURES**

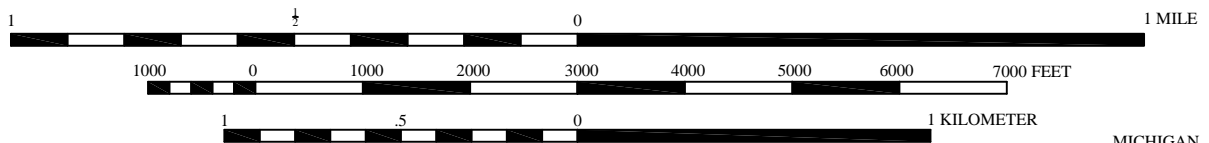


# HIGHLAND PARK QUADRANGLE

MICHIGAN - WAYNE COUNTY  
7.5 MINUTE SERIES (TOPOGRAPHIC)



T.1 S. - R.11 E.



CONTOUR INTERVAL 5 FEET  
DATUM IS MEAN SEA LEVEL

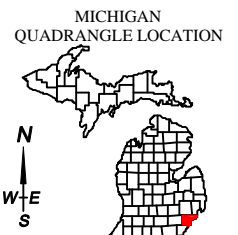


IMAGE TAKEN FROM 1968 U.S.G.S. TOPOGRAPHIC MAP  
PHOTOREVISED 1983



# Non-Responsive



**AKTPEERLESS**  
environmental & energy services

CHICAGO DETROIT FARMINGTON LANSING SAGINAW  
[www.aktpeerless.com](http://www.aktpeerless.com)

## *BORING LOCATION MAP*

*HAMTRAMCK HISTORICAL MUSEUM  
3015 HOLBROOK STREET  
HAMTRAMCK, MICHIGAN  
PROJECT NUMBER : PN 6476D-3-20*

DRAWN BY: K Edmond  
DATE: 4/27/2010

0 20 40  
SCALE: 1" = 40'

FIGURE 2

**TABLES**

Guidesheet Number	→	#10	#11	#12	#13	#14	#15	#18	#19	#20					
Parameters*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential and Commercial I Drinking Water Protection Criteria and	Groundwater Surface Water Interface Protection Criteria and RBSLs	Groundwater Contact Protection Criteria and RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria and RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) and RBSLs	Particulate Soil Inhalation Criteria and RBSLs	Direct Contact Criteria and RBSLs	Soil Saturation Concentration Screening Levels	Sample Location	HHM-HA-1	HHM-HA-2	HHM-HA-3	HHM-HA-3
*(Refer to detailed laboratory report for method reference data)											Collection Date	05/17/2010	05/17/2010	05/17/2010	05/17/2010
											Depth	(0.5-1)	(2-4)	(0.5-1)	(2-4)
Metals															
Arsenic	7440-38-2	5,800	4,600	70,000 (X)	2.0E+6	NLV	NLV	7.2E+5	7,600	NA		7,860	NA	NA	NA
Barium (B)	7440-39-3	75,000	1.3E+6	(G,X)	1.0E+9 (D)	NLV	NLV	3.3E+8	3.7E+7	NA		111,000	NA	NA	NA
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	2.3E+8	NLV	NLV	1.7E+6	5.5E+5	NA		890	NA	NA	NA
Chromium, Total	7440-47-3	18,000 (total)	30,000	3,300	1.4E+8	NLV	NLV	2.6E+5	2.5E+6	NA		9,660	NA	NA	NA
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	1.0E+9 (D)	NLV	NLV	1.3E+8	2.0E+7	NA		32,600	NA	NA	NA
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	ID	NLV	NLV	1.0E+8	4.0E+5	NA		171,000	NA	NA	NA
Mercury, Total	7439-97-6	130	1,700	50 (M); 1.2	47,000	48,000	52,000	2.0E+7	1.6E+5	NA		123	NA	NA	NA
Selenium (B)	7782-49-2	410	4,000	400	7.8E+7	NLV	NLV	1.3E+8	2.6E+6	NA		560	NA	NA	NA
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27	2.0E+8	NLV	NLV	6.7E+6	2.5E+6	NA		7,420	NA	NA	NA
Zinc (B)	7440-66-6	47,000	2.4E+6	(G)	1.0E+9 (D)	NLV	NLV	ID	1.7E+8	NA		224,000	NA	NA	NA
Semivolatiles, PNAs															
Acenaphthene	83-32-9	NA	3.0E+5	4,400	9.7E+5	1.9E+8	8.1E+7	1.4E+10	4.1E+7	NA		<300	NA	NA	NA
Acenaphthylene	208-96-8	NA	5,900	ID	4.4E+5	1.6E+6	2.2E+6	2.3E+9	1.6E+6	NA		<300	NA	NA	NA
Anthracene	120-12-7	NA	41,000	ID	41,000	1.0E+9 (D)	1.4E+9	6.7E+10	2.3E+8	NA		<300	NA	NA	NA
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	NLL	NLV	NLV	ID	20,000	NA		<300	NA	NA	NA
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	NLL	NLV	NLV	1.5E+6	2,000	NA		<300	NA	NA	NA
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	NLL	ID	ID	ID	20,000	NA		<300	NA	NA	NA
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLL	NLV	NLV	8.0E+8	2.5E+6	NA		<300	NA	NA	NA
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	NLL	NLV	NLV	ID	2.0E+5	NA		<300	NA	NA	NA
Chrysene (Q)	218-01-9	NA	NLL	NLL	NLL	ID	ID	ID	2.0E+6	NA		<300	NA	NA	NA
Dibenzo(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	NLL	NLV	NLV	ID	2,000	NA		<300	NA	NA	NA
Fluoranthene	206-44-0	NA	7.3E+5	5,500	7.3E+5	1.0E+9 (D)	7.4E+8	9.3E+9	4.6E+7	NA		<300	NA	NA	NA
Fluorene	86-73-7	NA	3.9E+5	5,300	8.9E+5	5.8E+8	1.3E+8	9.3E+9	2.7E+7	NA		<300	NA	NA	NA
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	NLL	NLV	NLV	ID	20,000	NA		<300	NA	NA	NA
1-Methylnaphthalene												<300	NA	NA	NA
2-Methylnaphthalene	91-57-6	NA	57,000	ID	5.5E+6	ID	ID	ID	8.1E+6	NA		<300	NA	NA	NA
Phenanthrene	85-01-8	NA	56,000	5,300	1.1E+6	2.8E+6	1.6E+5	6.7E+6	1.6E+6	NA		<300	NA	NA	NA
Pyrene	129-00-0	NA	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.7E+9	2.9E+7	NA		<300	NA	NA	NA
Volatiles															
Benzene (I)	71-43-2	NA	100	4,000 (X)	2.2E+5	1,600	13,000	3.8E+8	1.8E+5	4.0E+5		NA	<70	<70	<60
n-Butylbenzene	104-51-8	NA	1,600	ID	1.2E+5	ID	ID	ID	2.5E+6	1.0E+7		NA	<70	<70	<60
sec-Butylbenzene	135-98-8	NA	1,600	ID	88,000	ID	ID	ID	2.5E+6	1.0E+7		NA	<70	<70	<60
tert-Butylbenzene (I)	98-06-6	NA	1,600	NA	1.8E+5	ID	ID	ID	2.5E+6	1.0E+7		NA	<70	<70	<60
Ethylbenzene (I)	100-41-4	NA	1,500	360	1.4E+5 (C)	87,000	7.2E+5	1.0E+10	1.4E+5 (C)	1.4E+5		NA	<70	<70	<60
Isopropyl benzene	98-82-8	NA	91,000	ID	3.9E+5 (C)	3.9E+5 (C)	1.7E+6	5.8E+9	3.9E+5 (C)	3.9E+5		NA	<400	<300	<300
4-Methyl-2-pentanone (MIBK) (I)	108-10-1	NA	36,000	ID	2.7E+6 (C)	2.7E+6 (C)	4.5E+7	1.4E+11	2.7E+6 (C)	2.7E+6		NA	<4,000	<3,000	<3,000
Methyl-tert-butyl ether (MTBE)	1634-04-4	NA	800	15,000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	2.0E+11	1.5E+6	5.9E+6		NA	<300	<300	<200
n-Propylbenzene (I)	103-65-1	NA	1,600	NA	3.0E+5	ID	ID	1.3E+9	2.5E+6	1.0E+7		NA	<100	<100	<100
Styrene	100-42-5	NA	2,700	2,200	2.7E+5	2.5E+5	9.7E+5	5.5E+9	4.0E+5	5.2E+5		NA	<70	<70	<60
1,1,1,2-Tetrachloroethane	630-20-6	NA	1,500	ID (X)	4.4E+5 (C)	6,200	36,000	4.2E+8	4.4E+5 (C)	4.4E+5		NA	<100	<100	<100
1,1,2,2-Tetrachloroethane	79-34-5	NA	170	1,600 (X)	94,000	4,300	10,000	5.4E+7	53,000	8.7E+5		NA	<70	<70	<60
Tetrachloroethylene	127-18-4	NA	100	900 (X)	88,000 (C)	11,000	1.8E+5	5.4E+9	88,000 (C)	88,000		NA	<70	<70	<60
Toluene (I)	108-88-3	NA	16,000	2,800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	2.7E+10	2.5E+5 (C)	2.5E+5		NA	<100	<100	<100
Trichloroethylene	79-01-6	NA	100	4,000 (X)	4.4E+5	7,100	78,000	1.8E+9	5.0E+5 (C,DD)	5.0E+5		NA	<70	<70	<60
1,2,4-Trimethylbenzene (I)	95-63-6	NA	2,100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	8.2E+10	1.1E+5 (C)	1.1E+5		NA	<100	<100	<100
1,3,5-Trimethylbenzene (I)	108-67-8	NA	1,800	1,100	94,000 (C)	94,000 (C)	1.6E+7	8.2E+10	94,000 (C)	94,000		NA	<100	<100	<100
Xylenes (I)	1330-20-7	NA	5,600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	2.9E+11	1.5E+5 (C)	1.5E+5		NA	<170	<170	<160
Remaning VOCs	Various	-	-	-	-	-	-	-	-	-		ND	ND	ND	ND

**FOOTNOTES****FOR THE PART 201 CRITERIA/PART 213 RISK-BASED SCREENING LEVELS  
RRD OPERATIONAL MEMORANDUM No. 1**

- (A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 pa 399, mcl 325.1005.
- (B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.
- (C) Value presented is a screening level based on the chemical-specific generic soil saturation concentration ( $C_{sat}$ ) since the calculated risk-based criterion is greater than  $C_{sat}$ . Concentrations greater than  $C_{sat}$  are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase material containing a hazardous substance is not present.
- (D) Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
- (E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).
- (F) Criterion is based on adverse impacts to plant life and phytotoxicity.
- (G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
- (H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria.
- (I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001), which is adopted by reference in these rules.
- (J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.
- (K) Hazardous substance may be flammable or explosive, or both.
- (L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.
- (M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
- (N) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 ug/kg.
- (O) The concentration of all polychlorinated and polybrominated dibenzodioxin and dibenzofuran isomers present at a facility, expressed as an equivalent concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin based upon their relative potency, shall be added together and compared to the criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin.
- (P) Amenable cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with all groundwater criteria. Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria. Industrial-commercial direct contact criteria may not be protective of the potential for release of hydrogen cyanide gas. Additional land or resource use restrictions may be necessary to protect for the acute inhalation concerns associated with hydrogen cyanide gas.
- (Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.
- (R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001), which is adopted by reference in these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of \$45, from the superintendent of documents, government printing office, Washington, DC 20401 (stock number 869-044-00155-1), or from the dEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.
- (S) Criterion defaults to the hazardous substance-specific water solubility limit.
- (T) Refer to the federal Toxic Substances Control Act (TSCA), 40 C.F.R. §761, subpart d and 40 C.F.R. §761, Subpart G, to determine the applicability of TSCA cleanup standards. Subpart d and subpart g of 40 C.F.R. §761 (July 1, 2001) are adopted by reference in these rules and are available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulations may be purchased, at a cost as of the time of adoption of these rules of \$55, from the superintendent of documents, Government Printing Office, Washington, DC 20401, or from the dEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost. Alternatives to compliance with the TSCA standards listed below are possible under 40 C.F.R. §761 Subpart D. New releases may be subject to the standards identified in 40 C.F.R. §761, Subpart G. Use Part 201 soil direct contact cleanup criteria in the following table if TSCA standards are not applicable.
- (U) Hazardous substance may exhibit the characteristic of corrosivity as defined in 40 C.F.R. §261.22 (revised as of July 1, 2001), which is adopted by reference in these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of \$45, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401 (stock number 869-044-00155-1), or from the dEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.
- (V) Criterion is the aesthetic drinking water value as required by Section 20120(a)(5) of the NREPA. concentrations up to 200 ug/L may be acceptable, and still allow for drinking water use, as part of a site-specific cleanup under Section 20120a(2) of the NREPA.
- (W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.
- (X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. see formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.
- (Y) Source size modifiers shown in the following table shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre.
- (Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Specifically, data for elemental mercury, chemical abstract service (CAS) number 7439976, serve as the basis for the soil volatilization to indoor air criteria, groundwater volatilization to indoor air, and soil inhalation criteria. Data for methyl mercury, CAS number 22967926, serve as the basis for the GSI criterion; and data for mercuric chloride, CAS number 7487947, serve as the basis for the drinking water, groundwater contact, soil direct contact, and the groundwater protection criteria. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.
- (AA) Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.
- (BB) The state drinking water standard for asbestos is in units of fibers per milliliter of water (f/mL) longer than 10 millimicrons. Soil concentrations of asbestos are determined by polarized light microscopy.
- (CC) Groundwater: The generic GSI criteria are based on the toxicity of unionized ammonia (NH3); the criteria are 29 ug/L and 53 ug/L for cold water and warm water surface water, respectively. As a result, the GSI criterion shall be compared to the percent of the total ammonia concentration in the groundwater that will become NH3 in the surface water. This percent NH3 is a function of the pH and temperature of the receiving surface water and can be estimated using the following table, taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975).
- (DD) Hazardous substance causes developmental effects. Residential and commercial I direct contact criteria are protective of both prenatal and postnatal exposure. Industrial and commercial II, III and IV direct contact criteria are protective for a pregnant adult receptor.
- (EE) The following are applicable generic GSI criteria as required by Section 20120a(15) of the NREPA.
- (FF) The chloride GSI criterion shall be 125 mg/l when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/l when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the total dissolved solids criterion is applicable.
- (GG) Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and commercial/industrial land uses) was derived utilizing 25 percent of the lower explosive level for methane. This equates to 1.25 percent or 8.4E+6 ug/m3.
- ID Insufficient data to develop criterion.
- NA A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
- NLL Hazardous substance is not likely to leach under most soil conditions.
- NLV Hazardous substance is not likely to volatilize under most conditions.
- ug/Kg Micrograms per kilogram
- ug/L Micrograms per liter
- NS Not sampled
- BDL Below Laboratory Method Detection Limits

**APPENDIX A**

**SOIL BORING LOGS**



607 Shelby Street, Suite 550, Detroit, Michigan 48226  
Phone: (313) 962-9353 Fax: (313) 962-0966

## BORING LOG

Hamtramck Historical Museum  
3105 Holbrook Street  
Hamtramck, Michigan  
PROJECT NUMBER: 6476d-3-20

HHM-HA-1

Drawn By: MAB  
Date: 05/17/10

DRILLING COMPANY:	AKT Peerless	WEATHER:	60 F Sunny
TECHNICIAN:	Megan Bahorski	BORING DEPTH:	4 feet
DATE DRILLED:	05/17/10	DEPTH TO GW:	NA
DRILLING METHOD:	Hand Auger	SCREEN INTERVAL:	NA
FIELD GEOLOGIST:	Megan Bahorski	SCREEN MATERIAL:	NA

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						CONCRETE		
			0		Black	FILL: sand and gravel	D	
2		100		CL	Grey	CLAY: medium stiff	D	
			0				D	
4							D	
						End of Boring at 4 feet bgs	D	
6								
8								
10								
12								
14								
16								
18								
20								



607 Shelby Street, Suite 550, Detroit, Michigan 48226  
Phone: (313) 962-9353 Fax: (313) 962-0966

## BORING LOG

Hamtramck Historical Museum  
3105 Holbrook Street  
Hamtramck, Michigan  
PROJECT NUMBER: 6476d-3-20

HHM-HA-2

Drawn By: MAB  
Date: 05/17/10

DRILLING COMPANY:	AKT Peerless	WEATHER:	60 F Sunny
TECHNICIAN:	Megan Bahorski	BORING DEPTH:	4 feet
DATE DRILLED:	05/17/10	DEPTH TO GW:	NA
DRILLING METHOD:	Hand Auger	SCREEN INTERVAL:	NA
FIELD GEOLOGIST:	Megan Bahorski	SCREEN MATERIAL:	NA

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						CONCRETE		
			0		Black	FILL: sand and gravel	D	
2		100		CL	Grey	CLAY: medium stiff	D	
			0				D	
4							D	
						End of Boring at 4 feet bgs	D	
6								
8								
10								
12								
14								
16								
18								
20								



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Phone: (313) 962-9353 Fax: (313) 962-0966

## BORING LOG

Hamtramck Historical Museum  
3105 Holbrook Street  
Hamtramck, Michigan  
PROJECT NUMBER: 6476d-3-20

**HHM-HA-3**

Drawn By: MAB  
Date: 05/17/10

DRILLING COMPANY:	AKT Peerless	WEATHER:	60 F Sunny
TECHNICIAN:	Megan Bahorski	BORING DEPTH:	4 feet
DATE DRILLED:	05/17/10	DEPTH TO GW:	NA
DRILLING METHOD:	Hand Auger	SCREEN INTERVAL:	NA
FIELD GEOLOGIST:	Megan Bahorski	SCREEN MATERIAL:	NA

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						CONCRETE		
			0		Black	FILL: sand and gravel	D	
2		100		CL	Grey	CLAY: medium stiff	D	
			0				D	
4							D	
						End of Boring at 4 feet bgs		
6								
8								
10								
12								
14								
16								
18								
20								



## **APPENDIX B**

### **LABORATORY ANALYTICAL REPORT**



## Analytical Laboratory Report

Report ID: S44304.01(01)  
Generated on 05/26/2010

### Report to

---

Attention: Megan Bahorski  
AKT Peerless Environmental  
22725 Orchard Lake Rd.  
Farmington, MI 48336

Phone: 248-615-1333 FAX:  
Email: bahorskim@aktpeerless.com

### Report produced by

---

Merit Laboratories  
2680 East Lansing Drive  
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

### Report Summary

---

Lab Sample ID(s): S44304.01-S44304.06  
Project: 6476d-3-20  
Collected Date: 05/17/2010  
Submitted Date/Time: 05/19/2010 15:25  
Sampled by: Unknown  
P.O. #:

### Report Notes

---

Results relate only to items tested as received by the laboratory.  
Methods may be modified for improved performance.  
Results reported on a dry weight basis where applicable.  
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.  
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

A handwritten signature in cursive script that reads "Violetta F. Murshak".

Violetta F. Murshak  
Laboratory Director



## Analytical Laboratory Report

### Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S44304.01	HHM-HA-1 (0.5-1)	Soil	05/17/2010
S44304.02	HHM-HA-2 (2-4)	Soil	05/17/2010
S44304.03	HHM-HA-3 (2-4)	Soil	05/17/2010
S44304.04	HHM-HA-3 (0.5-1)	Soil	05/17/2010
S44304.05	TB	Liquid	05/17/2010
S44304.06	MB	Methanol	05/17/2010



# Analytical Laboratory Report

Lab Sample ID: S44304.01  
Sample Tag: HHM-HA-1 (0.5-1)  
Collected Date/Time: 05/17/2010  
Matrix: Soil  
COC Reference: 56488

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.6	IR
1	4oz Glass	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

### Extraction / Prep.

Mercury Digestion	Completed			7471A	05/24/10 15:30	JRT		
Metal Digestion	Completed			3050B	05/24/10 12:00	PER		
PNA Extraction	Completed			3550B	05/19/10 22:20	EMR		

### Inorganics

Total Solids	73	%	1	Std M 2540 B	05/20/10 12:30	DJS		
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### Metals

Arsenic	7.86	mg/kg	0.10	6020	05/24/10 15:52	PER	7440-38-2	
Barium	111	mg/kg	1.0	6020	05/24/10 15:52	PER	7440-39-3	
Cadmium	0.89	mg/kg	0.20	6020	05/24/10 15:52	PER	7440-43-9	
Chromium	9.66	mg/kg	0.50	6020	05/24/10 15:52	PER	7440-47-3	
Copper	32.6	mg/kg	1.0	6020	05/24/10 15:52	PER	7440-50-8	
Lead	171	mg/kg	0.30	6020	05/24/10 15:52	PER	7439-92-1	
Mercury	0.123	mg/kg	0.050	7471A	05/24/10 16:18	JRT	7439-97-6	
Selenium	0.56	mg/kg	0.50	6020	05/24/10 15:52	PER	7782-49-2	
Silver	7.42	mg/kg	0.20	6020	05/24/10 15:52	PER	7440-22-4	
Zinc	224	mg/kg	1.0	6020	05/24/10 15:52	PER	7440-66-6	

### Organics - Semi-Volatiles

#### Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	05/21/10 12:47	PL	90-12-0	



# Analytical Laboratory Report

Lab Sample ID: S44304.02  
Sample Tag: HHM-HA-2 (2-4)  
Collected Date/Time: 05/17/2010  
Matrix: Soil  
COC Reference: 56488

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.6	IR
1	4oz Glass	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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### Inorganics

Total Solids	81	%	1	Std M 2540 B	05/20/10 12:30	DJS		
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### Organics - Volatiles

#### Volatile Organics 5035

Diethyl ether	Not detected	ug/kg	300	8260B/5035	05/20/10 16:54	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	05/20/10 16:54	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	8260B/5035	05/20/10 16:54	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	1,000	8260B/5035	05/20/10 16:54	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	300	8260B/5035	05/20/10 16:54	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	05/20/10 16:54	JGH	109-99-9	
Chloroform	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	4,000	8260B/5035	05/20/10 16:54	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	4,000	8260B/5035	05/20/10 16:54	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	56-23-5	
Benzene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	124-48-1	



# Analytical Laboratory Report

Lab Sample ID: S44304.02 (continued)

Sample Tag: HHM-HA-2 (2-4)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Volatiles (continued)</b>								
<b>Volatile Organics 5035 (continued)</b>								
1,2-Dibromoethane	Not detected	ug/kg	30	8260B/5035	05/20/10 16:54	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH		
o-Xylene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	95-47-6	
Styrene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 16:54	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 16:54	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	400	8260B/5035	05/20/10 16:54	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	500	8260B/5035	05/20/10 16:54	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	500	8260B/5035	05/20/10 16:54	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	500	8260B/5035	05/20/10 16:54	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	500	8260B/5035	05/20/10 16:54	JGH	91-57-6	

M-Result reported to MDL not RDL



# Analytical Laboratory Report

Lab Sample ID: S44304.03  
Sample Tag: HHM-HA-3 (2-4)  
Collected Date/Time: 05/17/2010  
Matrix: Soil  
COC Reference: 56488

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.6	IR
1	4oz Glass	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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### Inorganics

Total Solids	89	%	1	Std M 2540 B	05/20/10 12:30	DJS		
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### Organics - Volatiles

#### Volatile Organics 5035

Diethyl ether	Not detected	ug/kg	200	8260B/5035	05/20/10 17:13	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	05/20/10 17:13	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	05/20/10 17:13	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	05/20/10 17:13	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	900	8260B/5035	05/20/10 17:13	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:13	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:13	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	05/20/10 17:13	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:13	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	05/20/10 17:13	JGH	109-99-9	
Chloroform	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	05/20/10 17:13	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	05/20/10 17:13	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	56-23-5	
Benzene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:13	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	124-48-1	



# Analytical Laboratory Report

Lab Sample ID: S44304.03 (continued)

Sample Tag: HHM-HA-3 (2-4)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Volatiles (continued)</b>								
<b>Volatile Organics 5035 (continued)</b>								
1,2-Dibromoethane	Not detected	ug/kg	20	8260B/5035	05/20/10 17:13	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH		
o-Xylene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	95-47-6	
Styrene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	05/20/10 17:13	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:13	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	60	8260B/5035	05/20/10 17:13	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	05/20/10 17:13	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:13	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:13	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:13	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:13	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:13	JGH	91-57-6	

M-Result reported to MDL not RDL





# Analytical Laboratory Report

Lab Sample ID: S44304.04  
Sample Tag: HHM-HA-3 (0.5-1)  
Collected Date/Time: 05/17/2010  
Matrix: Soil  
COC Reference: 56488

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.6	IR
1	4oz Glass	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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### Inorganics

Total Solids	84	%	1	Std M 2540 B	05/20/10 12:30	DJS		
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### Organics - Volatiles

#### Volatile Organics 5035

Diethyl ether	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	05/20/10 17:31	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	1,000	8260B/5035	05/20/10 17:31	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	05/20/10 17:31	JGH	109-99-9	
Chloroform	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	05/20/10 17:31	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	05/20/10 17:31	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	56-23-5	
Benzene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	124-48-1	



# Analytical Laboratory Report

Lab Sample ID: S44304.04 (continued)

Sample Tag: HHM-HA-3 (0.5-1)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Volatiles (continued)</b>								
<b>Volatile Organics 5035 (continued)</b>								
1,2-Dibromoethane	Not detected	ug/kg	30	8260B/5035	05/20/10 17:31	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH		
o-Xylene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	95-47-6	
Styrene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:31	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	70	8260B/5035	05/20/10 17:31	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	05/20/10 17:31	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:31	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:31	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:31	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:31	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	400	8260B/5035	05/20/10 17:31	JGH	91-57-6	

M-Result reported to MDL not RDL



# Analytical Laboratory Report

Lab Sample ID: S44304.05  
Sample Tag: TB  
Collected Date/Time: 05/17/2010  
Matrix: Liquid  
COC Reference: 56488

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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### Organics - Volatiles

#### Volatile Organics - DEQ List

Diethyl ether	Not detected	ug/L	10	8260B	05/25/10 15:21	JGH	60-29-7	
Acetone	Not detected	ug/L	50	8260B	05/25/10 15:21	JGH	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	05/25/10 15:21	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	30	8260B	05/25/10 15:21	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	05/25/10 15:21	JGH	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	05/25/10 15:21	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	05/25/10 15:21	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	56-23-5	
Benzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	100-41-4	



# Analytical Laboratory Report

Lab Sample ID: S44304.05 (continued)

Sample Tag: TB

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Volatiles (continued)</b>								
<b>Volatile Organics - DEQ List (continued)</b>								
p,m-Xylene	Not detected	ug/L	2	8260B	05/25/10 15:21	JGH		
o-Xylene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	95-47-6	
Styrene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	05/25/10 15:21	JGH	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	05/25/10 15:21	JGH	91-57-6	



# Analytical Laboratory Report

Lab Sample ID: S44304.06  
Sample Tag: MB  
Collected Date/Time: 05/17/2010  
Matrix: Methanol  
COC Reference: 56488

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Volatiles</b>								
<b>Volatile Organics 5035</b>								
Diethyl ether	Not detected	ug/kg	200	8260B/5035	05/20/10 17:50	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	05/20/10 17:50	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	05/20/10 17:50	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	800	8260B/5035	05/20/10 17:50	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	05/20/10 17:50	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	05/20/10 17:50	JGH	109-99-9	
Chloroform	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	05/20/10 17:50	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	05/20/10 17:50	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	56-23-5	
Benzene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	20	8260B/5035	05/20/10 17:50	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	630-20-6	

M-Result reported to MDL not RDL



# Analytical Laboratory Report

Lab Sample ID: S44304.06 (continued)

Sample Tag: MB

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Volatiles (continued)</b>								
<b>Volatile Organics 5035 (continued)</b>								
Ethylbenzene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH		
o-Xylene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	95-47-6	
Styrene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	05/20/10 17:50	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	50	8260B/5035	05/20/10 17:50	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	300	8260B/5035	05/20/10 17:50	JGH	91-57-6	

# Merit

Laboratories, Inc.

2880 East Lansing Dr., East Lansing, MI 48823  
Phone (517) 332-0167 Fax (517) 332-6333  
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

56488

## REPORT TO

## CHAIN OF CUSTODY RECORD

## INVOICE TO

CONTACT NAME <i>Megan Bahorski</i>	
COMPANY <i>AKT Peerless</i>	
ADDRESS <i>22725 Orchard Lake Rd</i>	
CITY <i>Farmington</i>	STATE <i>MI</i> ZIP CODE
PHONE NO. <i>248-615-1332</i>	FAX NO. <i>248-615-1334</i>
E-MAIL ADDRESS <i>bahorski@aktpeerless.com</i>	
QUOTE NO.	

CONTACT NAME		NAME	
COMPANY			
ADDRESS			
CITY	STATE	ZIP CODE	
PHONE NO.	FAX NO.	P.O. NO.	

### ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

PROJECT NO./NAME <i>6476d-3-2a</i>		SAMPLER(S) - PLEASE PRINT/SIGN NAME		SPECIAL INSTRUCTIONS/NOTES														
TURNAROUND TIME REQUIRED <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER																		
DELIVERABLES REQUIRED <input type="checkbox"/> STANDARD <input type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> OTHER																		
MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER O=OIL	S=SOIL A=AIR	L=LIQUID W=WASTE	SD=SOLID M=MISC	# Containers & Preservatives												
MERIT LAB NO.	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION		MATRIX	# OF BOTTLES	NONE	NO.	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	NaOH	OTHER					
44304.01	5/17		HHM-HA-1 (0.5-1)		S	2	X					X			VOCs	PMA	MT Metab	
02	↓		HHM-HA-2 (2-4)		S	2	X					X						
03			HHM-HA-3 (2-4)		S	2	X					X						
04			HHM-HA3 (0.5-1)		S	2	X					X						
05			TB															
06			MB															

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>Megan Bahorski</i>	DATE <i>5-18-10</i>	TIME <i>10:00</i>
RECEIVED BY: SIGNATURE/ORGANIZATION <i>OTW Merit</i>	DATE <i>5-18-10</i>	TIME <i>10:00</i>
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION <i>Bahorski</i>	DATE <i>5/19/10</i>	TIME <i>15:25</i>
SEAL NO.	SEAL INTACT YES ( ) NO ( )	INITIALS
SEAL NO.	SEAL INTACT YES ( ) NO ( )	INITIALS
NOTES.		TEMP. ON ARRIVAL <i>4.6</i>

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE